

In the Specification:

Please amend and substitute the following paragraph for the paragraph beginning on page 7, line 25, as follows:

~~The design of each stage assembly 18, 20.~~ In this embodiment, each stage assembly 18, 20 includes a stage base 42, a stage mover assembly 44, a first stage 46, and a second stage 48. In Figure 1, the stage base 42 for each stage assembly 18, 20 is generally rectangular shaped. The stage mover assembly 44 controls and moves the stages 46, 48 of each stage assembly 18, 20. For example, the stage mover assembly 44 can move the stages 46, 48 with three degrees of freedom, less than three degrees of freedom, or six degrees of freedom relative to the stage base 42. The stage mover assembly 44 can include one or more movers, such as rotary motors, voice coil motors, linear motors utilizing a Lorentz force to generate drive force, electromagnetic movers, planar motor, or some other force movers.

Please amend and substitute the following paragraph for the paragraph beginning on page 8, line 3, as follows:

In Figure 1, for each stage assembly 18, 20, the stage mover assembly 44 includes a pair of spaced apart Y stage movers 50, a guide bar 52, and a X stage mover 54 (illustrated in phantom). The Y stage movers 50 move the guide bar 52, and the stages 46, 48 with a relatively large displacement along the Y axis and with a limited range of motion about the Z axis, and the X stage mover ~~[[50]]~~ 54 moves the stages 46, 48 along the X axis relative to the guide bar 52.

Please amend and substitute the following paragraph for the paragraph beginning on page 9, line 33, as follows:

The measurement system 22 monitors the position of each second stage 48 of the reticle stage assembly 18 and the wafer stage assembly 20 relative to the optical

assembly 16 or some other reference. With this information, the control system 24 directs current to the stage mover assembly 44 of each stage assembly 18, 20 to precisely position each second stage 48. For example, the measurement system 22 can utilize multiple laser interferometers, encoders, and/or other measuring devices. A detailed description of a number of different embodiments of the measurement system 22 is described below.

Please amend and substitute the following paragraph for the paragraph beginning on page 11, line 7, as follows:

The stage mover assembly is not illustrated in Figure 2A. For example, the stage mover assembly can move the stage 248 along the X axis, along the Y axis and about the Z axis. In this embodiment, the stage 348 is moved ~~along~~ a long distance along the Y axis and moved a short distance along the X axis. Additionally, the stage mover assembly can move the stage 248 along the Z axis, about the X axis and about the Y axis.

Please amend and substitute the following paragraph for the paragraph beginning on page 11, line 13, as follows:

The design of the measurement system 222 can vary. For example, the measurement system 222 can measure the position of the stage 248 along at least one axis and/or about at least one axis. In the embodiment illustrated in Figure 2A, the measurement system 222 measures the position of the stage 248 along two axes and about one axis. More specifically, the measurement system 222 measures the position of the stage 248 along the X axis, along the Y axis, and about the Z axis. Alternatively, for example, (i) the measurement system could be designed to measure the position of the stage along the Y and Z axes and about the X axis, (ii) the measurement system could be designed to measure the position of the stage along the Y and Z axes and about the Y axis, or (iii) the measurement system could be designed to measure the position of the stage along the X, Y and Z axes and about the X, Y, and Z axes. Many

configurations of ~~he~~ the measurement system can be arranged.

Please amend and substitute the following paragraph for the paragraph beginning on page 13, line 14, as follows:

The second X beam 262A source 262A generates a second X beam 262F along a ~~first~~ second path that is directed substantially parallel to the Y axis, 180° from the first X beam 260F, at the second X optical unit 262B. The second optical unit 262B splits the second X beam 262F into a second X reference beam 262G and a second X measurement beam 262H. The axes of the measurement beams 260H and 262H are on the same axis that extends along the Y axis. The second X reference beam 262G is reflected within the second X optical unit 262B and redirected to the second X detector 262E. The second X measurement beam 262H is directed along the ~~first~~ second path parallel to the Y axis through the second X wave plate 262C to the second X redirector 262D. The second X redirector 262D redirects the second X measurement beam 262H along a redirected path that is 90° with respect to the ~~first~~ second path and towards the X reflector 266. The redirected path is parallel to the X axis. The X reflector 266 reflects the second X measurement beam 262H 180° along the X axis back toward the second X redirector 262D. Subsequently, the second X redirector 262D redirects the second X measurement beam 262H directed along the X axis 90° so that the second X measurement beam 262H is directed along the Y axis at the second X optical unit 262B. The second X optical unit 262B reflects the second X measurement beam 262H and redirects the second X measurement beam 262H back to the second X redirector 262D as a second X measurement beam 262H'. The second X redirector 262D redirects the second X measurement beam 262H' 90° with respect to the incoming beam along the X axis and towards the X reflector 266. The X reflector 266 reflects the second X measurement beam 262H' 180° along the X axis toward the second X redirector 262D. Subsequently, the second X redirector 262D redirects the second X measurement beam 262H' directed along the X axis 90° so that the second X measurement beam 262H' is directed along the Y axis at the second X optical unit 262B. The second X measurement beam 262H' passes through the second optical unit 262B and is directed

to the second X detector 262E. The second X detector 262E detects an interference beam of the second X reference beam 262G and the second X measurement beam 262H'.

Please amend and substitute the following paragraph for the paragraph beginning on page 18, line 15, as follows:

Additionally, in the embodiment illustrated in Figure 3, the first X system 360 includes a first X shield 380 and a second X shield 382 (in cut-away). In this embodiment, each shield 380, 382 is secured to the stage 348 and placed along the optical path of the X measurement beam 360H. In one embodiment, each shield 380, 382 is a tube that defines a shield aperture 384. The X measurement beam 360H beam is directed through the shield aperture 384. Alternatively, each shield 380, 382 can be a portion of a tube, or a semi-closed tube.